AUTODOC CLUB

How to change serpentine belt on a car – replacement tutorial

VIDEO TUTORIAL



THINGS YOU MAY NEED:



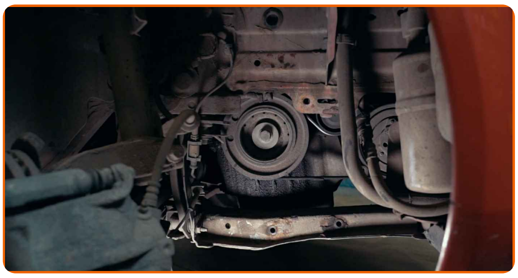
- a new serpentine belt
- a set of suitable tools
- torque wrench
- universal spray cleaner and a wire brush
- WD-40 spray
- depending on the car’s design: a jack, jack stands, and wheel chocks

BUY TOOLS

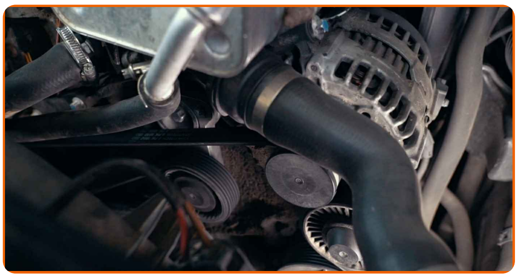
Installing a new serpentine belt may be necessary in the following cases:

- abnormal noises when the engine is started or running
- malfunctions of the engine-driven accessories
- routine replacement

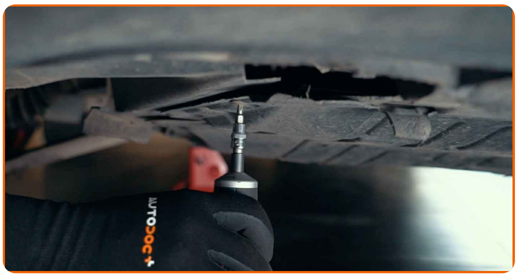
1 On most cars with a transverse engine you will need to remove the front right wheel to replace the belt



2 On some cars, you can access the belt just by opening the bonnet



3 On others, some car body parts have to be removed first



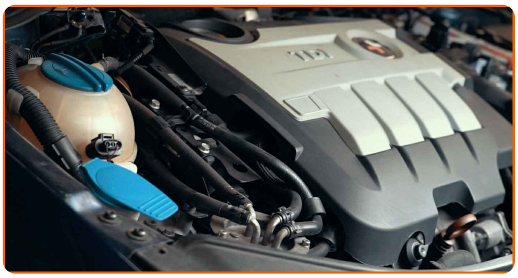
The serpentine belt drives the engine-driven accessories:

- viscous fan coupling
- alternator
- air conditioner compressor
- power steering pump
- water pump and other equipment

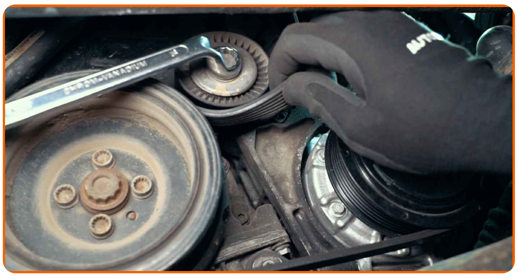
4 The serpentine belt transmits torque from the crankshaft to the pulleys of other devices, activating them



5 On most vehicles, you can locate the engine-driven accessories by opening the bonnet. However, you will not be able to replace the belt due to the tight space

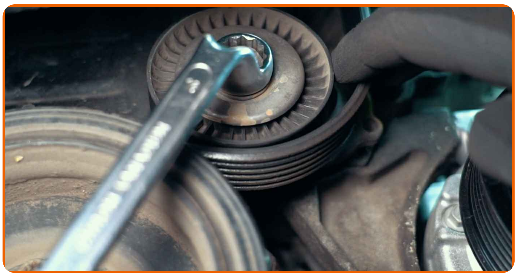


6 Loosen the belt before removing it. Use the tensioner pulley for this



7

Move the automatic tensioner aside or manually loosen the mechanical one. The belt can then be easily removed



There are two types of tensioners:

- - an automatic one uses a spring to tension the belt
- - a mechanical one needs to be turned manually to adjust the tension

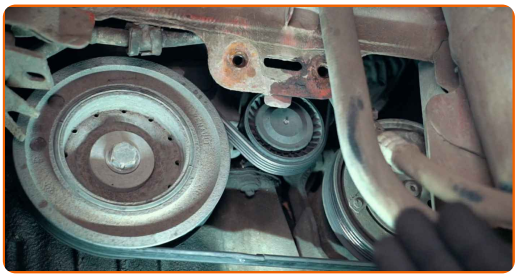
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There are self-tensioning belts which are used without a tensioning mechanism. Replacing this type of belt requires special equipment



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Access the belt and identify the tensioner type



10 Take a picture or sketch a belt routing diagram



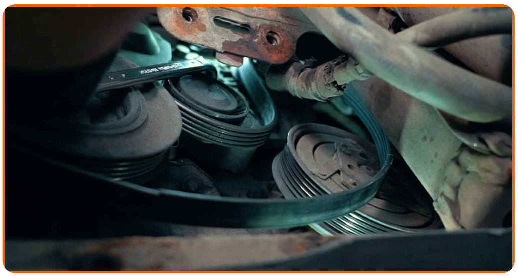
11 Attach a suitable tool to the tensioner and move it aside



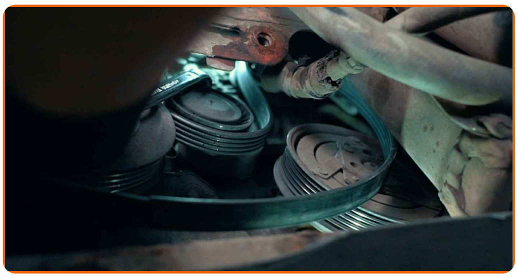
Important!

- The tool must be secured reliably to prevent injury

12 After loosening the belt, remove it from one of the pulleys



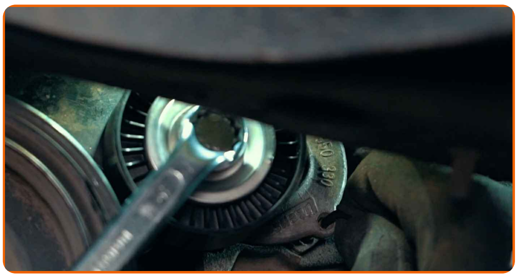
13 Return the tensioning mechanism to its original position



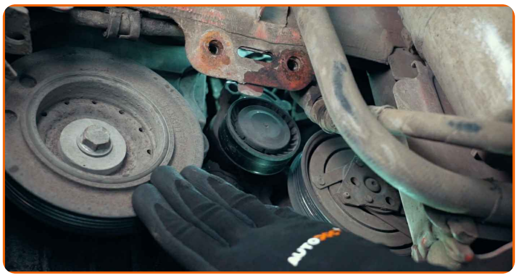
14 Remove the belt from the other pulleys



15 Use a lock pin if the design of the tensioner provides for this



16 Check that the tensioner and idler pulleys can move freely and check the condition of the alternator one-way clutch, crankshaft damper pulley, and all other pulleys



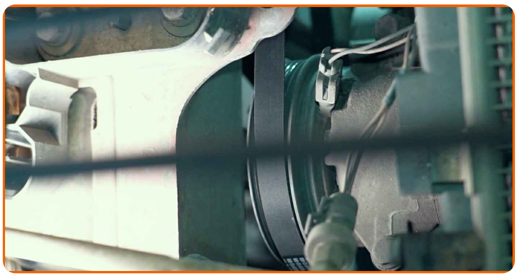
AUTODOC experts recommend:

- Replace these components if necessary

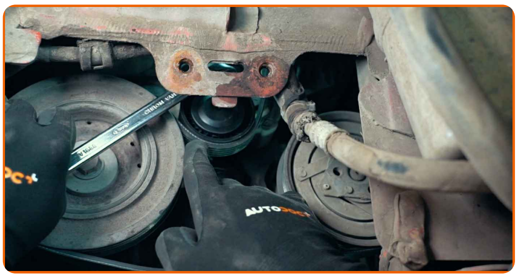
17 Position the new belt in accordance with the routing diagram



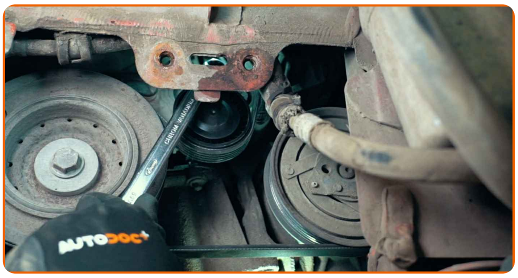
18 Install the belt on the pulleys one by one



19 Make sure that the belt is installed correctly, not misaligned, and that its ribs are fitted into the pulley grooves



20 Lower the tensioner and remove the lock pin if you used one



21 If the tensioner is mechanical, check the belt deflection by pressing on the long section between the pulleys



Important!

- It should not deflect too much

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If an automatic tensioner does not provide the correct tension, replace it

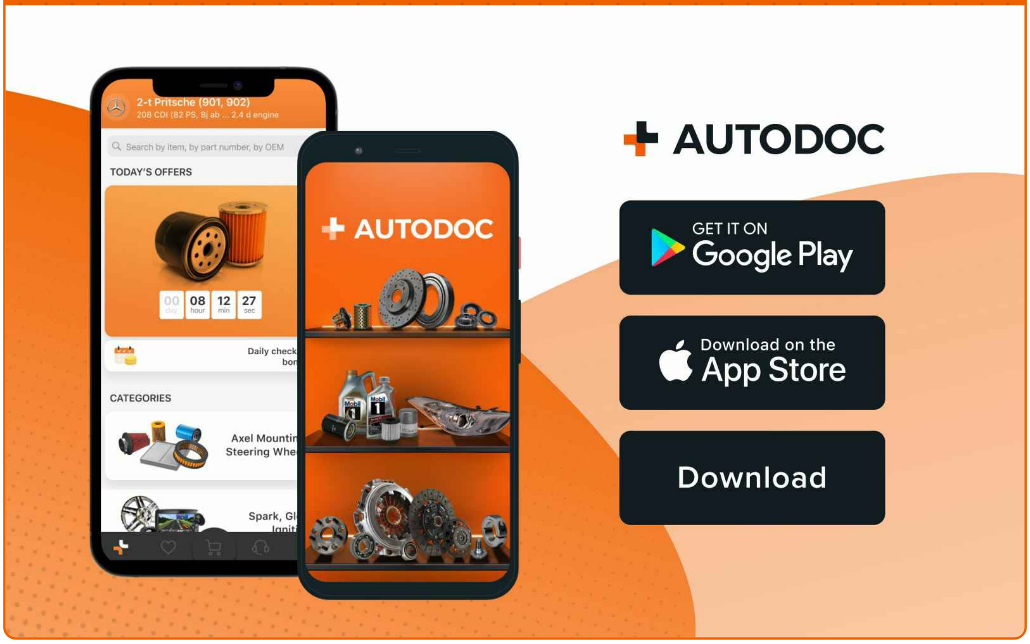


Please note!

- Special tools can be used to measure the tension

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